What Is Claimed Is:

1. A biologically active peptide at least 90 % identical to a peptide consisting essentially of the formula:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg,

provided that said peptide is not hPTH(1-26)NH_2, hPTH(1-27)NH_2 or hPTH(1-28)NH_2.

2. A biologically active peptide consisting essentially of the formula:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg,

provided that said peptide is not hPTH(1-26)NH_2, hPTH(1-27)NH_2 or hPTH(1-28)NH_2.

3. The peptide of claim 1 wherein the peptide is labeled with a label selected from the group consisting of radiolabel, flourescent label, bioluminescent label, or chemiluminescent label.

4. The peptide of claim 3, wherein said radiolabel is ^{99m}Tc.

5. The peptide of claim 1 which is:

GlyValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMetArgArgValGlu TrpLeuArgLysLysLeu (SEQ ID NO: 2).

6. The peptide of claim 1 which is:

AlaValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMetArgArgValGlu TrpLeuArgLysLysLeu (SEQ ID NO: 4).

7. The peptide of claim 1 which is:

GlyValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMetGluArgValGlu TrpLeuArgLysLysLeu (SEQ ID NO: 10).

8. The peptide of claim 1 which is:

AlaValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMetGluArgValGlu TrpLeuArgLysLysLeu (SEQ ID NO: 8).

9. The peptide of claim 1 which is:

SerValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMetArgArgValGlu TrpLeuArgLysLysLeu (SEQ ID NO: 6).

10. A pharmaceutical composition comprising

(a) a biologically active peptide at least 90% identical to a peptide consisting essentially of the formula:

X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMet

X_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg; and a pharmaceutically acceptable carrier.

11. A pharmaceutical composition comprising

(a) a biologically active peptide consisting essentially of the formula:

X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsnSerMet

X_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg; and a pharmaceutically acceptable carrier.

12. A nucleic acid molecule consisting essentially of a polynucleotide encoding a biologically active peptide which has an amino acid sequence selected from the group consisting of:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1); or

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg.

13. A recombinant DNA molecule comprising: (1) an expression control region, said region in operable linkage with (2) a polynucleotide sequence coding for a biologically active peptide, wherein said peptide is selected from the group consisting of:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1); or

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg.

14. A method of preparing a biologically active peptide comprising introducing into a host the recombinant DNA molecule of claim 13, and causing expression of said molecule.

15. A method for making a recombinant vector comprising inserting a nucleic acid molecule of claim 12 into a vector.

16. The recombinant DNA molecule of claim 13, wherein said control region includes a bacterial, viral, fungal or mammalian promoter.

17. A host cell containing the recombinant DNA molecule of claim 13.

18. The cell of claim 17 which is prokaryotic.

19. The cell of claim 18 which is bacterial.

20. The cell of claim 17 which is eukaryotic.

21. The cell of claim 20 which is a yeast cell or a mammalian cell.

22. A method for treating mammalian conditions characterized by decreases in bone mass, which method comprises administering to a subject in need thereof an effective bone mass-increasing amount of a biologically active peptide, wherein said peptide comprises an amino acid sequence at least 90% identical to a member selected from the group consisting essentially of:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg,

provided that said peptide is not hPTH(1-26)NH_2; hPTH(1-27)NH_2 or hPTH(1-28)NH_2; and a pharmaceutically acceptable carrier.

23. A method for treating mammalian conditions characterized by decreases in bone mass, which method comprises administering to a subject in

need thereof an effective bone mass-increasing amount of a biologically active peptide consisting essentially of the formula:

(a) X_{01}ValSerGluIleGlnLeuMetHisAsnLeuGlyLysHisLeuAsn SerMetX_{02}ArgValGluTrpLeuArgLysLysLeu (SEQ ID NO:1);

(b) fragments thereof containing amino acids 1-24, 1-25, 1-26, or 1-27;

(c) pharmaceutically acceptable salts thereof; or

(d) N– or C- derivatives thereof;

wherein:

X_{01} is Ser, Ala or Gly; and

X_{02} is Glu or Arg;

provided that said peptide is not hPTH(1-26)NH_2, hPTH(1-27)NH_2 or hPTH(1-28)NH_2; and a pharmaceutically acceptable carrier.

24. A method for determining rates of bone formation, bone resorption and/or bone remodeling comprising administering to a patient an effective amount of a peptide of claim 4 and determining the uptake of said peptide into the bone of said patient.

25. The method of claim 23, wherein said effective bone mass-increasing amount of said peptide is administered by providing to the patient DNA encoding said peptide and expressing said peptide in vivo.

26. A method of claim 23, wherein the condition to be treated is osteoporosis.

27. A method of claim 23, wherein said osteoporosis is old age osteoporosis.

28. A method of claim 23, wherein said osteoporosis is post-menopausal osteoporosis.

29. A method of claim 23, wherein the effective amount of said peptide for increasing bone mass is from about 0.01 μg/kg/day to about 1.0 μg/kg/day.

30. The method of claim 23, wherein the method of administration is parenteral.

31. The method of claim 23, wherein the method of administration is subcutaneous.

32. The method of claim 23, wherein the method of administration is nasal insufflation.

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